



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,675	10/29/2003	Bernard Bon	A34252-1 - 070337.0358	5043

27215 7590 11/13/2006

MICHELIN NORTH AMERICA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
MARC BLDG 31-2
P.O. BOX 2026
GREENVILLE, SC 29602

EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,675

Applicant(s)

BON, BERNARD

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-15 and 17-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 1771

1. The art rejections over Babinec have been withdrawn in view of present arguments and declaration filed 09/01/2006. As pointed out by Applicant, Babinec uses steam to effect and coalescing and welding of the beads to form the article while Applicant uses water as a blowing agent. Due to differences in purposes, one skilled in the art would not be motivated to use the steam of Babinec in a specific amount as set out in the claims.
2. The art rejections based on WO 00/37517 have been withdrawn in view of the English Translation of a certified copy of FR 00/05346 filed 04/25/2000.
3. New grounds of rejections are made in view of newly discovered references to Mizata et al (H1,870), Sahnoune et al (US 6,787,607) and Park (US 5,567,742).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-10, 12, 14, 17, 19, 21, 23-25 and 28 are rejected under 35

U.S.C. 102(e) as being anticipated by Mizata et al (H1870). Mizata discloses a cross-linkable, expandable filling material comprising butyl rubber which is a copolymer of isobutylene and isoprene (column 2, lines 65-66), 30 phr to 50 phr silica, carbon black and 4 to 10 phr chemical blowing agent (tables 1 and 2). The filling material is mounted on a wheel rim as shown in figure 1. The filling material has a closed cell structure (abstract). The filling material has a water absorption of 5% or lower (column 2, lines 60-62). Likewise, the filling material could contain up to 5 wt% water. Mizata discloses the steps of making a foamed filling material (column 4, lines 50-57). Accordingly, Mizata anticipates the claimed subject matter.

7. Claims 11, 13, 15, 18, 20, 22, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizata et al (H1870) as applied to claim 7 above, and further in view of Nohara (US 6,135,180). Mizata does not teach the use of azobisformamide as a blowing agent which is present in an amount of from 15 phr to 30 phr. Nohara, however, teaches a foamed rubber composition for tread and pneumatic tire comprising azobisformamide as a blowing agent which is present in an amount of from 0.5 to 15 phr (column 4, lines 20-25 and 29). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the blowing agent in the range instantly

claimed motivated by the desire to obtain a tire tread which is excellent in a performance on ice, abrasion resistance, tear resistance and crack resistance.

8. Claims 7-10, 14, 17, 21, 23, 24 and 28 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sahnoune et al (US 6,787,607). Sahnoune discloses a cross-linkable, expandable resin composition comprising EPDM rubber or butyl rubber which is a copolymer of isobutylene and isoprene (column 3, lines 5-20, table 1), and a blowing agent in an amount of 1.8 %wt based on the total weight of the resin composition. Sahnoune discloses that a blowing agent is a water generating material (claim 9). Likewise, the water generating material is present in an amount of 3.62 parts by weight based on 100 parts by weight of EPDM rubber (tables 2 and 3, and example 5). Water absorption test indicates that the resin composition containing 1.8 wt% water or 3.62 parts by weight based on 100 parts by weight of EPDM rubber. The resin composition includes carbon black and silica in an amount of 11.9 wt% or 23.8 parts by weight based on 100 parts by weight of elastomer (table 2, column 3, lines 35-36). Sahnoune discloses the foam having high cell density, smooth surface and low water absorption. Likewise, it is clearly apparent that the foam would inherently have a closed cell structure for low water absorption when submerged in water. Claims 7-9 do not require a cellular support be part of a cross-linkable, expandable blank, therefore, any limitations associated with the support are not required by the claims. Sahnoune does not disclose the resin composition useful as an elastomeric

safety support. It has been held that a recitation with respect to the manner in which a claimed blank is intended to be employed does not differentiate the claimed blank from a prior art resin composition satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Sahnoune does not teach the foamed structure being capable of being mounted on a wheel rim. However, since the foamed structure is made of a composition similar to the composition of the cellular support of the present invention, it is the examiner's position that the foamed structure would be substantially, inherently capable of being mounted on the wheel rim.

Sahnoune does not specifically disclose the steps of making a closed cell foam structure. However, they are product-by-process limitations not as yet shown to produce a patentably distinct article. It is the examiner's position that the resin composition Sahnoune is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity as discussed above. Even though product-claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between

the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the tire of Sahnoun. Accordingly, Sahnoun anticipates or strongly suggests the claimed subject matter.

9. Claims 12, 19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sahnoun et al (US 6,787,607) as applied to claims 7, 8 and 10 above, further in view of Wang (US 5,939,464). Sahnoun does not specifically disclose the blowing agent could be used in an amount greater than 5 phr. Wang, however, teaches a high elastic foam made from a blend of thermoplastic vulcanizate and an elastic thermoplastic polymer and a blowing agent in an amount of from 0.1wt% to 10wt% based on 100 wt% of the foamed composition. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the blowing agent in the range instantly claimed in view of the balance of degree of foaming and mechanical strength of the product (see Wang, column 7, lines 25-30)
10. Claims 7, and 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Park (US 5,567,742). Park discloses a cross-linkable, expandable resin composition comprising a copolymer of propylene and isoprene (column 2, lines 20-35), CO₂ in an amount of 1.5 gmoles per kg of polymer or 6.6 phr and water

in an amount of 2 gmoles per kg of polymer or 3.6 phr (1 mole of water is equivalent to 18 g) (table IVa-continued). Park discloses the blowing agent which is a mixture of CO₂ and water could be used in an amount up to 5 gmoles per kg of polymer (column 3, lines 15, and 50-52). Table IVa-continuous shows that water could be used up to 2 gmoles per kg of polymer. Likewise, CO₂ could be used up to 3 gmoles per kg of polymer or 13.2 phr. The blowing agent is a combination of inorganic agent and chemical blowing agent such as azobisformamide (column 3, lines 15-20 and 44-45). The chemical blowing agent could be present in an amount up to 75% by weight of the total weight of the inorganic and chemical blowing agents (column 3, lines 9-12). The amount of blowing agent incorporated into the polymer melt is about 0.2 to 5 moles per kg of polymer (column 3, lines 50-55). The azobisformamide is present in the amount in the polymer melt of at least $0.2 \times 0.75 \times 116.1 = 17 \text{ phr}$. Claim 7 does not require a cellular support be part of a cross-linkable, expandable blank, therefore, any limitations associated with the support are not required by the claims. Park does not disclose the resin composition useful as an elastomeric safety support. It has been held that a recitation with respect to the manner in which a claimed blank is intended to be employed does not differentiate the claimed blank from a prior art resin composition satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Accordingly, Park anticipates the claimed subject matter.

Conclusion

Art Unit: 1771

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV

Hai Vo

HA VO
PRIMARY EXAMINER